



Εργαστήριο 8

Ασκήσεις: Files and Directories in C

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#include <stdio.h> // NULL
#include <sys/types.h>
#include <dirent.h> // opendir, readdir, closedir
#include <unistd.h> // chdir
#include <sys/stat.h> // lstat
#include <stdlib.h> // exit
#include <string.h> // strcmp

// function prototype
void printdir(char *, int);

int main(int argc, char *argv[])
{
    if(argc != 2) {
        printf("./lsdir <directory>\n");
        exit(-1);
    }
    printf("Directory scan of %s:\n", argv[1]);
    printdir(argv[1], 0);
    printf("done.\n");
    return 0;
}

void printdir(char *dir, int indent)
{
    DIR *dp;
    struct dirent *entry;
    struct stat statbuf;

    if((dp = opendir(dir)) == NULL) {
        perror(dir);    return;
    }

    chdir(dir);    // change directory

    while((entry = readdir(dp)) != NULL) {
        lstat(entry->d_name, &statbuf);
        if (S_ISDIR(statbuf.st_mode)) {
            /* Found a directory, but ignore . and .. */
            if(strcmp(".", entry->d_name) == 0 || strcmp("..", entry->d_name)
== 0)
                continue;
            printf("%*s%s/\n", indent, "", entry->d_name);
            /* Recurse using a new indent offset */
            printdir(entry->d_name, indent+4);
        }
        else
            printf("%*s%s\n", indent, "", entry->d_name);
    }

    chdir("../");
    closedir(dp);
}
```